

IN THE CLAIMS:

A complete listing of the claims is set forth below. Please amend the claims as follows:

1-42. **(Canceled)**

43. **(Currently Amended)** A computer-implemented system for managing data associated with available-to-promise (ATP) products, comprising:

a memory storing a hierarchy of seller models, each seller model representing a seller of a product ~~one or more products within a hierarchy of sellers and within a seller organization, each product having a product forecast model representing, the seller being within a hierarchy of~~ sellers, wherein:

the hierarchy of sellers comprises at least one parent seller and at least two sub-sellers associated with the parent seller,

the parent seller is represented by a seller model of the hierarchy of seller models,
and

the parent seller forecasts sales of the product, and

two or more of the at least two sub-sellers associated with the parent seller do not commit to sell an amount of the product included in the sales forecasted by the parent seller; and

~~forecasted sales of the product through each seller;~~

~~planned supply of the product;~~

~~customer orders for the product through each seller; and~~

~~pre-allocated supply of the product to each seller, the pre-allocated supply is a supply of the product pre-allocated to each seller to promise to subsequent customer orders for the product through each seller; and~~

a processor coupled with the memory, wherein the processor:

computes ~~[[the]]~~ an amount of the product that is ATP at ~~[[a]]~~ at least one seller represented by a seller model according to, at least, ~~[[the]]~~ planned supply of the product, ~~[[the]]~~ one or more customer orders for the product through ~~each seller~~ one or more sellers represented by at least one of the seller models, a ~~[[the]]~~ pre-allocated supply of the product to ~~each seller~~ the at least one seller represented by a seller model, and an ~~[[the]]~~ amount of the product that is ATP at one or more other sellers within the hierarchy of sellers ~~within the seller organization;~~

~~wherein the processor further~~ adjusts the pre-allocated supply of the product to the at least one seller represented by a seller model ~~each seller~~ according to customer orders across a time horizon and recomputes the amount of the product that is ATP at the at least one seller represented by a seller model ~~each seller~~ according to the adjusted pre-allocated supply~~[[.]]; and~~

requires a sub-seller of the two or more of the at least two sub-sellers to be ATP at the parent seller prior to authorizing the portion of the product to be promised by the sub-seller.

44. **(Currently Amended)** The system of Claim 43, wherein the processor further adjusts the pre-allocated supply of the product to the at least one seller represented by a seller model ~~each seller~~ according to one or more business criteria selected from the group consisting of seller criteria, product criteria, forecast criteria, supply criteria, customer order criteria, and policy criteria

45. **(Currently Amended)** The system of Claim 43, wherein the processor further:

communicates product forecast models to a remote system;

receives from the remote system a promise computed at the remote system for a customer order requesting a quantity of a product through the at least one seller represented by a seller model ~~each seller~~, the promise computed according to the pre-allocated supply of the product to the at least one seller represented by a seller model ~~each seller~~;

receives from the remote system adjusted product forecast models reflecting the promise;

and

recomputes the amount of the product that is ATP at the at least one seller represented by a seller model ~~each seller~~.

46. **(Previously Presented)** The system of Claim 45, wherein:

all product forecast models for one or more sellers are communicated to the remote system; and

wherein the processor further:

receives from the remote system the promise also computed according to the amount of the product that is ATP at the one or more other sellers in the hierarchy; and

adjusts the amount of the product that is ATP at the one or more other sellers in the hierarchy when the promise exceeds the pre-allocated supply of the product to each seller.

47. **(Currently Amended)** The system of Claim 43, wherein the product forecast model further represents a quantity of the product each seller has committed to selling and the processor adjusts the pre-allocated supply of the product to the at least one seller represented by a seller model ~~each seller~~ according to the committed quantity.

48. **(Currently Amended)** The system of Claim 43, wherein the processor further:
accepts a customer order requesting a quantity of a product through the at least one seller represented by a seller model ~~each seller~~, and computes a promise for the customer order according to the planned supply and one or more existing customer orders, the promise restricted according to the pre-allocated supply of the product to the at least one seller represented by a seller model ~~each seller~~.

49. **(Currently Amended)** The system of Claim 43, wherein:
each product forecast model is extensible such that one or more policy rules is associated with the corresponding product;
each policy rule comprises a restriction on either the forecasted sales or the pre-allocated supply of the product to the at least one seller represented by a seller model ~~each seller~~; and
either the forecasted sales or the pre-allocated supply of the product to the at least one seller represented by a seller model ~~each seller~~ is computed according to the policy rules.

50. **(Currently Amended)** The system of Claim 43, wherein the processor further adjusts either the forecasted sales or the pre-allocated supply of the product to the at least one seller represented by a seller model ~~each seller~~ according to an arrival rate of customer orders for the product through the at least one seller represented by a seller model ~~each seller~~.

51. **(Currently Amended)** A computer-implemented system for managing data associated with available-to-promise (ATP) products, comprising:

a memory storing a hierarchy of seller models representing a seller of a plurality of products ~~within a hierarchy of sellers and within a seller organization,~~ each product of the plurality of products corresponding ~~that each correspond~~ to an item having one or more restrictions on its sale, at least two products of the plurality of products corresponding to the same item but with at least one different restriction, ~~each product having a product forecast model representing the seller being within a hierarchy of sellers, wherein:~~

the hierarchy of sellers comprises at least one parent seller and at least two sub-sellers associated with the parent seller,

the parent seller is represented by a seller model of the hierarchy of seller models,
and

the parent seller forecasts sales of the product, and

two or more of the at least two sub-sellers associated with the parent seller do not commit to sell an amount of the product included in the sales forecasted by the parent seller; and

~~forecasted sales of the product through each seller;~~

~~planned supply of the product;~~

~~customer orders for the product through each seller; and~~

~~pre-allocated supply of the product to each seller, the pre-allocated supply is a supply of the product pre-allocated to each seller to promise to subsequent customer orders for the product through each seller; and~~

a processor coupled with the memory, wherein the processor:

computes [[the]] an amount of the product that is ATP at [[a]] at least one seller represented by a seller model according to, at least, a [[the]] planned supply of the product, [[the]] one or more customer orders for the product through each seller one or more sellers represented by at least one of the seller models, a [[the]] pre-allocated supply of the product to each seller the at least one seller represented by a seller model, and an

[[the]] amount of the product that is ATP at one or more other sellers within the hierarchy of sellers ~~within the seller organization~~; ;

~~wherein the processor further~~ adjusts the pre-allocated supply of the product to the at least one seller represented by a seller model ~~each seller~~ according to customer orders across a time horizon and recomputes the amount of the product that is ATP at the at least one seller represented by a seller model ~~each seller~~ according to the adjusted pre-allocated supply[[]]; and

requires a sub-seller of the two or more of the at least two sub-sellers to reserve at least a portion of the product calculated to be ATP at the parent seller prior to authorizing the portion of the product to be promised by the sub-seller.

52. **(Previously Presented)** The system of Claim 51, wherein the restrictions are selected from the group consisting of price restrictions, quantity restrictions, and lead time restrictions.

53. **(Currently Amended)** The system of Claim 51, wherein the processor further adjusts the pre-allocated supply of the product to the at least one seller represented by a seller model ~~each seller~~ according to one or more business criteria selected from the group consisting of seller criteria, product criteria, forecast criteria, supply criteria, customer order criteria, and policy criteria.

54. **(Currently Amended)** The system of Claim 51, wherein the processor further:

communicates product forecast models to a remote system;

receives from the remote system a promise computed at the remote system for a customer order requesting a quantity of one or more items through the at least one seller represented by a seller model ~~each seller~~, the promise computed according to at least the pre-allocated supply for corresponding products;

receives from the remote system adjusted product forecast models reflecting the promise;

and

recomputes the amounts of the corresponding products that are ATP at the at least one seller represented by a seller model ~~each seller~~.

55. **(Previously Presented)** The system of Claim 51, wherein the product forecast model further represents a quantity of corresponding products each seller has committed to selling and the processor adjusts the pre-allocated supply of the product to each seller according to the committed quantity.

56. **(Currently Amended)** The system of Claim 51, wherein the processor further:

accepts a customer order requesting quantities of one or more items through the at least one seller represented by a seller model ~~each seller~~; and

computes a promise for the customer order according to the pre-allocated supply for corresponding products, wherein the promise comprises a plurality of options each with one or more of the restrictions specified for these products.

57. **(Currently Amended)** The system of Claim 51, wherein:

each product forecast model is extensible such that one or more policy rules is associated with the corresponding product;

each policy rule comprises a restriction on either the forecasted sales or the pre-allocated supply of the product to the at least one seller represented by a seller model ~~each seller~~; and

either the forecasted sales or the pre-allocated supply of the product to the at least one seller represented by a seller model ~~each seller~~ are computed according to the policy rules.

58. **(Currently Amended)** The system of Claim 51, wherein the processor further adjusts either the forecasted sales or the pre-allocated supply for one or more products for the at least one seller represented by a seller model ~~each seller~~ according to an arrival rate of customer orders for those products through the at least one seller represented by a seller model ~~each seller~~.

59. **(Currently Amended)** A method for managing data associated with available-to-promise (ATP) products, comprising:

accessing by a computer comprising a memory and a processor, a hierarchy of seller models stored in the memory, each seller model representing a seller of a product ~~one or more products within a hierarchy of sellers and within a seller organization, each product having a product forecast model representing~~, the seller being within a hierarchy of sellers, wherein

the hierarchy of sellers comprises at least one parent seller and at least two sub-sellers associated with the parent seller,

the parent seller is represented by a seller model of the hierarchy of seller models,
and

the parent seller forecasts sales of the product, and

two or more of the at least two sub-sellers associated with the parent seller do not commit to sell an amount of the product included in the sales forecasted by the parent seller; and

~~forecasted sales of the product through each seller;~~

~~planned supply of the product;~~

~~customer orders for the product through each seller; and~~

~~pre-allocated supply of the product to each seller, the pre-allocated supply is a supply of the product pre-allocated to each seller to promise to subsequent customer orders for the product through each seller; and~~

computing by the processor, ~~[[the]]~~ an amount of the product that is ATP at ~~[[a]]~~ at least one seller represented by a seller model according to, at least, a ~~[[the]]~~ planned supply of the product, [[the]] one or more customer orders for the product through ~~each seller~~ one or more sellers represented by at least one of the seller models, a ~~[[the]]~~ pre-allocated supply of the product to each seller the at least one seller represented by a seller model, and an ~~[[the]]~~ amount of the product that is ATP at one or more other sellers within the hierarchy of sellers ~~within the seller organization;~~

~~wherein the processor further adjusts~~ adjusting, by the processor, the pre-allocated supply of the product to the at least one seller represented by a seller model ~~each seller~~ according to customer orders across a time horizon and recomputes the amount of the product that is ATP at the at least one seller represented by a seller model ~~each seller~~ according to the adjusted pre-allocated supply[[]]; and

requiring, by the processor, a sub-seller of the two or more of the at least two sub-sellers to reserve at least a portion of the product calculated to be ATP at the parent seller prior to authorizing the portion of the product to be promised by the sub-seller.

60. **(Currently Amended)** The method of Claim 59, further comprising adjusting the pre-allocated supply of the product to the at least one seller represented by a seller model ~~each seller~~ according to one or more business criteria selected from the group consisting of seller criteria, product criteria, forecast criteria, supply criteria, customer order criteria, and policy criteria.

61. **(Currently Amended)** The method of Claim 59, further comprising:

communicating product forecast models to a remote system;

receiving a promise computed at the remote system for a customer order requesting a quantity of a product through the at least one seller represented by a seller model ~~each seller~~, the promise having been computed according to the pre-allocated supply of the product to the at least one seller represented by a seller model ~~each seller~~;

receiving from the remote system adjusted product forecast models reflecting the promise; and

recomputing the amount of the product that is ATP at the at least one seller represented by a seller model ~~each seller~~.

62. **(Previously Presented)** The method of Claim 61:

wherein all product forecast models for one or more sellers are communicated to the remote system;

wherein the promise is computed according to the amount of the product that is ATP at the one or more other sellers in the hierarchy; and

further comprising adjusting the amount of the product that is ATP at the one or more other sellers in the hierarchy when the promise exceeds the pre-allocated supply of the product to each seller.

63. **(Currently Amended)** The method of Claim 59:

wherein the product forecast model further represents a quantity of the product the at least one seller represented by a seller model ~~each seller~~ has committed to selling; and

further comprising adjusting the pre-allocated supply of the product to the at least one seller represented by a seller model ~~each seller~~ according to the committed quantity.

64. **(Currently Amended)** The method of Claim 59, further comprising:

accepting a customer order requesting a quantity of a product through the at least one seller represented by a seller model ~~each seller~~, and computing a promise for the customer order according to the planned supply and one or more existing customer orders, the promise restricted according to the pre-allocated supply of the product to the at least one seller represented by a seller model ~~each seller~~.

65. **(Currently Amended)** The method of Claim 59, wherein:

each product forecast model is extensible such that one or more policy rules is associated with the corresponding product;

each policy rule comprises a restriction on either the forecasted sales or the pre-allocated supply of the product to the at least one seller represented by a seller model ~~each seller~~; and

either the forecasted sales or the pre-allocated supply of the product to the at least one seller represented by a seller model ~~each seller~~ is computed according to the policy rules.

66. **(Currently Amended)** The method of Claim 59, further comprising adjusting either the forecast values or the pre-allocated supply of the product to the at least one seller represented by a seller model ~~each seller~~ according to an arrival rate of customer orders for the product through the at least one seller represented by a seller model ~~each seller~~.

67. **(Currently Amended)** A method for managing data associated with available-to-promise (ATP) products, comprising:

accessing by a computer comprising a memory and a processor, a hierarchy of seller models stored in the memory, each seller model representing a seller of a plurality of products ~~within a hierarchy of sellers and within a seller organization, each product of the plurality of products corresponding that each correspond~~ to an item having one or more restrictions on its sale, at least two products of the plurality of products corresponding to the same item but with at least one different restriction ~~each product having a product forecast model representing the seller being within a hierarchy of sellers, wherein:~~

the hierarchy of sellers comprises at least one parent seller and at least two sub-sellers associated with the parent seller,

the parent seller is represented by a seller model of the hierarchy of seller models,
and

the parent seller forecasts sales of the product, and

two or more of the at least two sub-sellers associated with the parent seller do not commit to sell an amount of the product included in the sales forecasted by the parent seller; and

~~forecasted sales of the product through each seller;~~

~~planned supply of the product;~~

~~customer orders for the product through each seller; and~~

~~pre-allocated supply of the product to each seller, the pre-allocated supply is a supply of the product pre-allocated to each seller to promise to subsequent customer orders for the product through each seller; and~~

computing by the processor, [[the]] an amount of the product that is ATP at [[a]] at least one seller represented by a seller model according to, at least, a [[the]] planned supply of the product, [[the]] one or more customer orders for the product through each seller one or more sellers represented by at least one of the seller models, a [[the]] pre-allocated supply of the product to each seller the at least one seller represented by a seller model, and an [[the]] amount

of the product that is ATP at one or more other sellers within the hierarchy of sellers ~~within the seller organization;~~

~~wherein the processor further adjusts~~ adjusting, by the processor, the pre-allocated supply of the product to the at least one seller represented by a seller model ~~each seller~~ according to customer orders across a time horizon and recomputes the amount of the product that is ATP at the at least one seller represented by a seller model ~~each seller~~ according to the adjusted pre-allocated supply[[]]; and

requiring, by the processor, a sub-seller of the two or more of the at least two sub-sellers to reserve at least a portion of the product calculated to be ATP at the parent seller prior to authorizing the portion of the product to be promised by the sub-seller.

68. **(Previously Presented)** The method of Claim 67, wherein the restrictions are selected from the group consisting of price restrictions, quantity restrictions, and lead time restrictions.

69. **(Currently Amended)** The method of Claim 67, further comprising adjusting the pre-allocated supply of the product to the at least one seller represented by a seller model ~~each seller~~ according to one or more business criteria selected from the group consisting of seller criteria, product criteria, forecast criteria, supply criteria, customer order criteria, and policy criteria.

70. **(Currently Amended)** The method of Claim 67, further comprising:

- communicating product forecast models to a remote system;
- receiving a promise computed at the remote system for a customer order requesting a quantity of one or more items through the at least one seller represented by a seller model ~~each seller~~, the promise having been computed according to at least the pre-allocated supply for corresponding products;
- receiving from the remote system adjusted product forecast models reflecting the promise; and
- recomputing the amounts of the corresponding products that are ATP at the at least one seller represented by a seller model ~~each seller~~.

71. **(Currently Amended)** The method of Claim 67, wherein:

- the product forecast model further represents a quantity of corresponding products the at least one seller represented by a seller model ~~each seller~~ has committed to selling; and
- further comprising adjusting the pre-allocated supply of the product to the at least one seller represented by a seller model ~~each seller~~ according to the committed quantity.

72. **(Currently Amended)** The method of Claim 67, further comprising:

accepting a customer order requesting quantities of one or more items through the at least one seller represented by a seller model ~~each seller~~, and computing a promise for the customer order according to the pre-allocated supply for corresponding products, wherein the promise comprises a plurality of options each with one or more of the restrictions specified for these products.

73. **(Currently Amended)** The method of Claim 67, wherein:

each product forecast model is extensible such that one or more policy rules is associated with the corresponding product;

each policy rule comprises a restriction on either the forecasted sales or the pre-allocated supply of the product to the at least one seller represented by a seller model ~~each seller~~; and

either the forecasted sales or the pre-allocated supply of the product to the at least one seller represented by a seller model ~~each seller~~ is computed according to the policy rules.

74. **(Currently Amended)** The method of Claim 67, further comprising adjusting either the forecasted sales or the pre-allocated supply for one or more products for the at least one seller represented by a seller model ~~each seller~~ according to an arrival rate of customer orders for those products through the at least one seller represented by a seller model ~~each seller~~.